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# THESIS

JOB SATISFACTION AND RACE AMONG
MILITARY OFFICERS

by

Ellen S. Bristow

December 1985

Thesis Advisor:            G. W. Thomas

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This thesis investigated the extent of variation in levels of job satisfaction among military officers that could be attributed to race. The data came from the 1978 Department of Defense Survey of Officers and Enlisted Personnel conducted by the Rand Corporation. The population analyzed was black and white officers in all four services, with the ranks of 01 through 03, who were still within their initial period of obligated service. Factor analysis was performed on a set of job characteristics to determine if differences existed between the black and white officers in the ranking and relative importance of these characteristics. The results of the factor analysis were used to formulate two multivariate models that explain job satisfaction for black and white officers separately. Knowledge of the aspects of work that are important to these officers can provide manpower planners with information that can improve the attainment of recruiting and retention goals in the future.

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and Race Among
Military Officers

by

Ellen S. Bristow
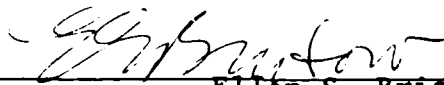Lieutenant, United States Navy
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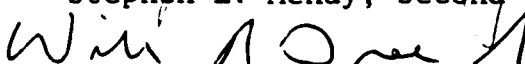NAVAL POSTGRADUATE SCHOOL
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# ABSTRACT

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# I. INTRODUCTION

## A. OVERVIEW

### 1. Job Satisfaction

The construct of job satisfaction is very complex. It is related to human behaviors such as turnover and job performance as well as to mental health and quality of life. Research on job satisfaction has implications for organizations and for the people in them.

Locke (1976) defined job satisfaction as "a pleasurable or positive emotional state, resulting from the appraisal of one's job or job experiences". Morale and job satisfaction are not the same. Morale is usually used as a measure of group well-being while satisfaction is an individual emotional reaction. [Ref. 1: p. 3]

### 2. Historical Background

The earliest studies of job satisfaction were conducted by industrial psychologists who were concerned with increasing productivity. Specifically, they were interested in how productivity could be changed as a result of manipulating the physical environment (Taylor 1911, Hawthorne 1920s).

The role of supervision and other social factors in productivity was another subject of early experiments. For a number of reasons, including inadequacy of experimental designs and the difficulty of interpreting the results in the environment of the depression years, these experiments failed to demonstrate that social factors were critical to improving productivity. These experiments did, however, lead directly to the establishment of the human relations school of thought in organizational psychology. The assumption of researchers in this area is that job satisfaction leads to increased productivity and that human relationships in organizations are the key to job satisfaction. Human

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relationships in organizations includes leadership, supervision and informal social groups. Today, this explanation of the composition of job satisfaction is considered by most researchers to be overly simplistic and inadequate. [Ref. 1: pp. 6-7]

One of the first major works on job satisfaction that used surveys and attitude scales for measurment was published by Hoppock (1935). He used what is generally termed the traditional approach which maintains that job satisfaction consists of a multiplicity of factors and assumes that a variable that leads to satisfaction with a job will lead to dissatisfaction if it is missing. From his experiments, Hoppock was able to show that there was a relationship between job satisfaction and general life satisfaction. This suggested that individual characteristics would affect the amount of satisfaction someone would derive from a particular job. His work also raised the question of whether or not people become satisfied when they stay in a job because they adapt to their situation. [Ref. 1: p. 7]

Job satisfaction studies have been criticized for being static because they usually take a snapshot view of satisfaction at one point in time rather than examining how satisfaction changes during an individual's lifetime. Some theorists maintain that an individual's job satisfaction is constantly changing as it adapts to changing situations and to changes in the individual's and in society's values. This is supported by studies that indicate that satisfaction varies by age. [Ref. 1: p. 27]

### 3. Job Satisfaction and Turnover

Turnover refers to the event that occurs when an individual crosses the boundary from a member of an organization to a non-member. Several studies have documented that job satisfaction is a predictor of turnover (Mobley, Griffeth, Hand and Meglino, 1979; Porter and Steers, 1973; Price, 1977) [Ref. 2: p. 17]. Job satisfaction however,

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seems to be one of a number of variables that contribute to an individual's decision to remain in or leave an organization. Many of the same variables that affect job satisfaction also affect the decision to stay or quit (eg. perceived availability of other job opportunities, demographic factors and attitudinal factors).

Figure 1.1 is the Arnold and Feldman Model (1982) which includes job satisfaction as one of the determinants of turnover. These researchers found that the individual's age, job satisfaction and degree of organizational committment affected his/her intention to search for alternative employment. Tenure, intention to search and the individual's perception of job security were found to have the greatest effect on the turnover decision. [Ref. 2: p. 23]

AGE        TENURE

JOB
SATISFACTION    → INTENTION
          TO     → TURNOVER
         SEARCH

ORGANIZATIONAL    PERCEPTION
COMMITTMENT      OF JOB
         SECURITY
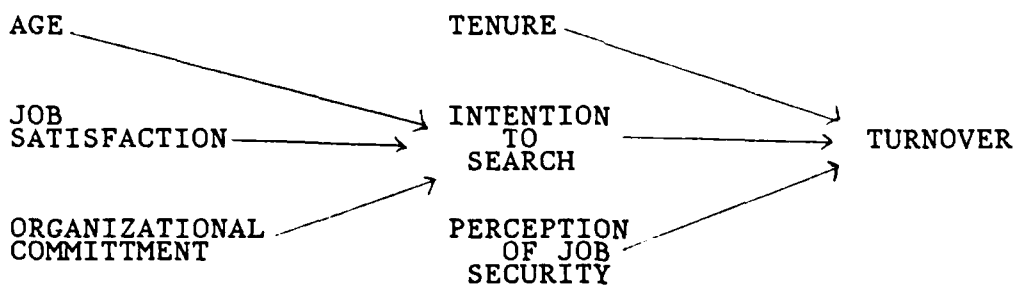
Figure 1.1  Arnold and Feldman Model of Turnover.

B.   REVIEW OF LITERATURE

    1.   Introduction

        Studies into the nature of job satisfaction have been given increasing attention over the last twenty years. There is not complete agreement among researchers on the composition of job satisfaction or the best method for analyzing satisfaction.

The multitude of studies attest to the importance of understanding the factors relating to job satisfaction. The existing literature has approached the construct of job

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satisfaction from many angles and has produced volumes on
the relationship between an individual's satisfaction with
his/her work and other job-related phenomena such as produc-
tivity, quality of life, physical and mental health, the
environment and other variables.

2. Behavioral Science Theory

Behavioral science theory that attempts to explain
job satisfaction is extensive and diverse. Herzberg,
Maslow, Lawler, Morgensen and Vroom have provided a founda-
tion for the more recent research that has been undertaken
in this field.

Frederick Herzberg's Motivation-Hygeine Theory is
considered a landmark in behavioral science. He identified
two categories of job factors that affect job satisfaction,
extrinsic (hygeine) and intrinsic (motivation). Examples of
extrinsic factors are pay, supervision, working conditions,
organization policy and administrative and interpersonal
relations. Intrinsic factors are achievement, recognition,
responsibility, challenging work, advancement and possi-
bility for growth. [Ref. 3: pp. 4-5]

According to Herzberg, satisfaction and dissatisfac-
tion are not opposites but are actually separate dimensions.
Extrinsic factors cause dissatisfaction when they fall below
a level considered acceptable by the individual. However,
even when the extrinsic factors are above the acceptable
level, they do not cause satisfaction. It is the intrinsic
factors that cause satisfaction, but conversely, their
absence does not generally cause dissatisfaction. To moti-
vate the individual to be more productive and to achieve a
level of higher job satisfaction, the work must be made more
interesting and challenging by increasing the intrinsic
rewards. [Ref. 3: pp. 5-6]

Herzeberg also considered how differences in indi-
vidual personalities would impact motivation. He claimed
that there are "motivation seekers" who achieve the greatest

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satisfaction and motivation from the intrinsic rewards of
their work and who have a high tolerance for poor extrinsic
conditions.   The second personality type is the "maintenance
seekers" who are affected to the greatest degree by their
environment and are preoccupied by the extrinsic aspects of
their jobs.   [Ref. 3: p. 6]

Abraham Maslow developed the theory of Need
Hierarchy.   Maslow postulated that individual motivation was
not only a complex construct but was constantly changing.
How important the next level of individual needs is, depends
on the degree of fulfillment of the previous level of needs.
Once a level of needs is achieved, its importance decreases.
Maslow maintained that human beings rarely reach complete
satisfaction; if they do it is only for brief periods of
time.   [Ref. 3: p. 7]

Each level of Maslow's hierarchy of needs contains
primary factors of satisfaction and dissatisfaction.   The
needs are ordered so that the degree of satisfaction at each
level is inversely related to its position in the hierarchy
with the needs that provide the greatest degree of satisfac-
tion at the lowest level.   Herzberg's extrinsic factors are
at the lowest level of Maslow's hierarchy and his intrinsic
factors are on the top two levels.   An individual's motiva-
tion and behavoir will be affected by the degree to which
his/her expectations are filled.   People have different
capacities and requirements to fill the needs on each level.
[Ref. 3: p. 7]

Herzberg's Motivation-Hygeine theory and Maslow's
Need Hierarchy are examples of content theories because they
deal primarily with identifying the factors that make up job
satisfaction and dissatisfaction.   In contrast to these are
the process theories that are interested in describing the
interactions between the different variables that are
related to job satisfaction.   Process theories may be subdi-
vided into expectations and equity theories, reference group

theories and needs/value fulfillment theories. Expectation theories consider the effect of an individual's expectations about the environment on behavior. An important aspect of people's expectations is that they provide a frame of reference that is used to make judgements about the environment. People use their frames of reference in deciding for example, what is reasonable pay. Equity theory maintains that people compare their own efforts and rewards to those of others. Where others are perceived as receiving more rewards for the same effort, an individual becomes dissatisfied. [Ref. 1: pp. 19-20]

Reference group theory argues that the groups that an individual relates to are important to the understanding of job satisfaction. Individual characteristics are important to this theory also, since it is these personal characteristics that will determine what groups the individual relates to and to what degree the groups will influence the individual's evaluation of his/her environment. [Ref. 1: p. 22]

Vroom postulated that there were two forms of need/value fulfillment theories. The first is the subtractive model which states that job satisfaction is negatively related to the difference between an individual's needs and how much of those needs are fulfilled on the job. This model does not take into account the relative importance of different needs and therefore failure of a job to fulfill a lesser need can be offset by the fulfillment of relatively important needs. The second model, the multiplicative model, of need fulfillment attemps to incorporate need importance. The perceived amount of need fulfillment is multiplied by the importance of the need to the individual. The products are summed to give a measure of total job satisfaction. Locke (1976) feels that this model is lacking in that it fails to distinguish between how much a person wants something (its importance) and how much of something a

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person wants. In measuring discrepancy, people may be influenced by value and in measuring value, people may be influenced by the difference between what they want and what the job offers. Locke also maintains that it is what the individual values that is important rather than needs. He argues that people will value things that they do not need. Most theorists use the terms need and value interchangeably. [Ref. 1: p. 26]

Edward Lawler theorized that there are four "core dimensions" of a job that an individual receives personal satisfaction from when he/she performs a task well. The first dimension is |variety| in skills and the abilities required in procedures and variety in equipment and opera- tions. The second dimension is the |autonomy| that exists in the individual's ability to schedule work and procedures and in general responsibility for his/her own work. The third dimension is the degree of |task| identity with the work and the results. |Feedback| on job performance is the fourth dimension. [Ref. 3: pp. 10-11]

Based on several large-scale studies, Lawler came to a number of conclusions. He maintained that the core dimen- sions affected work quality more than quantity (produc- tivity). Individuals do not react the same to jobs high in the core dimensions; it is important, therefore, to have a good match between the individual and the job. Supervisors and subordinates do not always have the same perceptions about the subordinates job; the supervisor often sees the subordinates job as being much better than the subordinate considers it to be. This inability of the supervisor to be aware of the subordinates attitude toward his/her job is a major obstacle toward job enrichment (ie. increasing the core dimensions). Increasing the core dimensions of a particular job leads to the individual's desire for still greater enrichment of the dimensions. Lawler's major point is that the needs and capabilities of the individual should

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match the job and that jobs should be made to rate as high on the four core dimensions as possible. [Ref. 3: pp. 11-12]

Alan Morgensen, in his Work Simplification Theory, postulated that individuals receive the greatest satisfaction from activities that they enjoy. His theory emphasizes the organizational climate and interpersonal relationships at work as the major determinants of job satisfaction. The way an individual feels about a situation and his/her attitude, are major factors in determining satisfaction. This theory attempts to establish a job improvement program that can be used as a productivity tool, by stressing friendliness, understanding and teamwork. The objective is to relate the individual's motives to the goals of the organization. Work Simplification is also a way of giving the individual a feeling of control and participation in work planning and problem solving which makes the individual more satisfied with his/her job and leads to support of corporate goals. [Ref. 3: pp. 16-19]

This is not a complete summary of the earlier theories concerning job satisfaction. It does, however, provide some background that more recent research has built upon.

3. Recent Research

Many of the early studies on job satisfaction attempted to place all workers into two or three categories that would subsequently predict what characteristics of the job they would derive satisfaction from. The more recent research refines these theories to more accurately define the biographic and demographic characteristics of individuals or groups that influence satisfaction, as well as the various elements of the job that will impact job satisfaction.

Since job satisfaction has been found to be correlated with satisfaction in other areas of life and with general life satisfaciton (Andrews and Wiley, 1976; Campbell

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et al., 1976; London, Crandall and Seals, 1977), researchers have been encouraged to examine the personal characteristics of the individual that might influence his/her response to the work experience. Biographic characteristics studied, particularly from national survey data, are age, sex, education and race. Age has been shown to be positively correlated with job satisfaction (Andrews and Withey, 1976; Campbell et al., 1976; Colin, 1979; Ebeling, King and Rogers, 1979; Glenn, Taylor and Weaver, 1977). Sex does not show a direct correlation with job satisfaction (Andrews and Withey, 1976; Campbell et al., 1976; Ebeling et al., 1979; Quinn, Staines and Mccullough, 1974; Weaver, 1977); however, sex may indirectly affect the association between satisfaction and other variables. Education has been found to be negatively correlated with satisfaction (Campbell et al., 1976) which is explained by the individual with higher education expecting more from the job and therefore being less satisfied with it. Biographic characteristics, however, rarely account for more than five or six percent of the variance in measured satisfaction (Campbell et al., 1976). [Ref. 4: p. 120]

The effect of personality on job satisfaction has been examined through analysis of the individual's psychological need structure and through self-reported feelings of alienation. The relationship between needs and work is multidimensional (Jackson, Peacock and Smith, 1980; Rothstein and Jackson, 1980; Seiss and Jackson, 1971; Skinner and Jackson, 1977) [Ref. 5: p. 711]. Cawsey, Reed and Reddon (1982) maintained that by focusing on only a few needs of the individual, incomplete understanding of the underlying relationships between needs and job satisfaction will be obtained. More sophisticated methods of measurement have been developed that enable researchers to examine a broader spectrum of human needs. [Ref. 5: p. 704]

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Cawsey et al. compared French and English speaking managers in Canada. To measure job satisfaction, they used the Job Descriptive Index (JDI) (Smith, Kendall and Hulin, 1969). Five facets of job satisfaction, work, supervision, pay, promotion and co-workers, were combined additively to measure overall job satisfaction. They concluded that the relationship between task, structure of the organization, individual differences in needs and job satisfaction is very complex. Cultural differences were detected, implied by differences between the two groups in need strength levels. Variations in measured job satisfaction were explained as an interaction between organization structure and individual needs. Others have suggested that a successful explanatory model for job satisfaction might be formulated from the interplay between these elements. [Ref. 5: p. 712]

Studies that have used Maslow's Motivational Personality Theory to assess psychological needs, have not been particularly helpful in understanding job satisfaction. Higher level needs have been reported to have weak moderating effects on the correlation between job characteristics and job satisfaction (Hackmanand Lawler, 1971; O'Reilly and Roberts, 1975; Schmitt et al., 1978; Sims and Szilagyi, 1976; Stone, Mowday and Porter, 1977). [Ref. 4: p. 120]

The concept of locus of control (Rotter 1966) has been used by itself and in conjunction with other variables, to explain job satisfaction (Szilagyi, Sims and Keller, 1976; Organ and Green, 1974; Gemmill and Heisler, 1972) [Ref. 6: p. 855]. There are two loci of control, internal and external. People who believe that their own behavior will determine their personal rewards have an internal locus of control. Individuals who believe that their personal rewards result from factors other than their own behavoir have an external orientation. People with a more internal orientation have been found to experience greater job satisfaction (Gemmill and Heisler, 1972; Organ and Green, 1974;

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Sims and Keller, 1976) and greater psychological growth
satisfaction from their work (Kimmons and Greenhaus, 1976;
Dailey, 1980).  [Ref. 6: p. 856]

King, Murray and Atkinson (1982) combined measures
of feelings of internal versus external control (IE control)
with general alienation and interpersonal trust measures and
biographic and job characteristic variables to predict job
satisfaction.  General alienation was measured by estrange-
ment from the policies and practices of the institution.
Trust was measured by expectations concerning the behavior
of coworkers and supervisors [Ref. 4: p. 121].  Their find-
ings were that of the job characteristics measured, occupa-
tional category had the strongest correlation with job
satisfaction.  Managers and professionals were the most
satisfied; blue collar workers were the least satisfied.
Higher prestige and higher pay were also associated with
higher satisfaction.  Correlated with lower satisfaction
were self-reported problems with hours, high frequency of
supervision, tiredness on the job, dangerous working condi-
tions and little or no control over pace of work and
overtime.  [Ref. 4: p. 126]

General alienation and IE control were the two
strongest personality correlates of job satisfaction.
People less alienated and those with strong feelings of
internal control were more satisfied.  [Ref. 4: p. 128]

Among the biographic characteristics, married
workers reported higher satisfaction than those who were
divorced, separated, widowed or never married.  People who
were older, had larger families and were better educated
were more satisfied.  These relationships, however, were
generally weak.  Sex differences in satisfaction were not
significant.  [Ref. 4: p. 128]

The strongest relationship found by King, et al. was
between job satisfaction and the personality variables.
There are some theorists who have maintained that an

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individual's expectations and personality interact with the objective elements of an experience in determining the person's affective response to that experience (Campbell, 1976; McKemmel, 1974). In addition, psychological theories hold that personality is developed early in life and that it impacts on the individual's perception of responses to later experiences. [Ref. 4: p. 129]

Andrisani and Nestel's (1976) research suggests a reciprocal relationship between internal/external control and job satisfaction. Using longitudinal data they showed that workers with strong feelings of internal control in 1969, had increased in job satisfaction and in earnings between 1969 and 1971. Conversely, workers with lower occupational attainment and more external orientation in 1969 expressed even stronger feelings of external control in 1971. In the first case, degree of internal/external control predicted the change in satisfaction and earnings; in the second case, occupational experiences predicted the change in feelings of internal/external control. Expectations and perceptions seem to be important consideration in an understanding of job satisfaction. [Ref. 4: p. 130]

Butler and Burr (1980) applied a multidimensional locus of control scale (Levenson, 1973, 1975) to a study of U.S. Navy personnel. They found that higher internal scores were negatively related to self-reported mental health and positively correlated to over-all satisfaction with the Navy. They also confirmed their research hypothesis that among externally oriented individuals, Powerful Others scored significantly higher than Chance. This was expected because of the nature of the military rank structure and strict chain of command. [Ref. 7: p. 726]

Job choice and the relative impact of extrinsic and intrinsic job characteristics on job satisfaction have been the subjects of research. Some studies have shown that an

individual who feels that he/she was pressured or
constrained into making a job choice will be less committed
to that choice and report lower satisfaction with that job
(Salanik, 1977; Lepper and Greene, 1975; Wortman, 1975)
[Ref. 8: p. 560]. The pressure can be personal (ie.
family), economic (eg. financial pressures) or political.
Straw (1974) found in his study of ROTC cadets, that when
the draft was ended, the removal of this pressure to join
the military was correlated with an increased committment to
the program by those already enrolled. Other studies have
shown that jobs chosen for extrinsic reasons (eg. salary or
location) will be less satisfying than those chosen for
intrinsic reasons (eg. opportunity for learning and growth)
(Dunette, Campbell and Hakel, 1967) [Ref. 8: p. 560].

In a study of Master's of Business Administration
graduates, O'Reilly and Caldwell (1980) concluded that the
aspects of the job that the individual considers when making
a job choice, in addition to whatever is experienced on the
job, will be predictive of subsequent job satisfaction and
organizational committment. Extrinsic job factors were
analyzed and only external pressures was negatively corre-
lated with job satisfaction. They also found that intrinsic
concerns were associated with increased committment to the
organization but not to higher tenure intentions [Ref. 8:
pp. 561-562]. Contrary to some previous studies that demon-
strated that an extrinsic reward could actually reduce
intrinsic motivation (Calder and Straw, 1975; Ross, 1975),
this research indicated that individuals who chose jobs for
extrinsic reasons reported higher satisfaction than people
who rated the extrinsic rewards lower. One interpretation
of this finding is that the existence of the positive
extrinsic rewards is considered by the individual as confir-
mation that he/she had made the right job choice. This

supports other studies that maintain that intrinsic and extrinsic factors have an additive nature (Hamner and Foster, 1975; Scott, 1976) [Ref. 8: p. 564].

One of the most popular methods for analyzing job satisfaction is by examining one or more aspects of the job and relating them to the individuals subsequent satisfaction. Studies linking job goals and their effects on motivation and satisfaction, fall into this category. Examples of these types of studies are those linking goal-setting feedback to satisfaction (Latham and Kinne, 1974; Locke, 1968); the relationship between knowledge of results and satisfaction (Brethower, 1973; Locke, Cartledge and Knerr, 1970); and the association between superior's praise of the worker and that worker's subsequent satisfaction (Deci, 1971; Skinner, 1969). [Ref. 9: p. 27]

There are three contemporary approaches to motivation. Content theorists maintain that need satisfaction and improved motivation result from relating the achievement of goals to the individual's personal needs. According to process or expectancy theory, goal-setting relates to outcomes and the relative value (valence) of these outcomes to the individual. Reinforcement theory perceives goal-setting as a foundation for using reinforcment. Futrell and Parasuraman (1981), in a study using a national pharmaceutical manuafacturer's sales force, concluded that clarity of goals has a strong, positive direct effect on job satisfaction. [Ref. 9: pp. 27-30]

Related to the works on goal-setting are those that look at the impact of role conflict and role ambiguity on satisfaction (Bagozyi, 1978; Churchill, et al., 1976; Donnelly and Ivancevich, 1975; House and Rizzo, 1972; Kahn, et al., 1964; Lyons, 1971; Miles, 1976; Szilogyi, et al., 1976). Role conflict and ambiguity increase tension, which lowers job satisfaction [Ref. 9: p. 27].

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Futrell and Parasuraman (1981) found that in addition to clarity of goals directly effecting job satisfaction, it also appeared to indirectly effect satisfaction by affecting role conflict. Greater clarity of goals leads to reduced role conflict which leads to greater satisfaction. They concluded that role conflict and role ambiguity affected satisfaction differently. Role conflict negatively affected an individual's satisfaction with the work while role ambiguity negatively influenced company satisfaction. [Ref. 9: p. 31]

Role conflict and role ambiguity have been shown to be associated with lower performance evaluations, low organizational committment and propensity to leave the organization [Ref. 10: p. 248]. Bedeian, Armenakis and Curran (1981), in their study of role ambiguity and conflict in an American hospital, confirmed previous research with their findings that both constructs were significantly, negatively correlated with job satisfaction. They were not, however, able to support one of their hypotheses that role ambiguity and conflict would be higher at higher levels of the organization and that the relationship between role conflict and role ambiguity would be greatest at lower levels of the organization. Organization level did not significantly interact with either role conflict or with role ambiguity. They also concluded that role ambiguity and conflict were significantly associated with tension and propensity to leave. What this study and others like it suggest is that the structure of the organization, the degree to which the organizations practices and procedures are clear and consistent, will affect the individual's satisfaction with his/her job. [Ref. 10: pp. 255-258]

Some researchers have been able to relate satisfaction, and its counterpart morale, to the degree of role structure within the organization (Burns and Stalker; Likert; Hickson) [Ref. 11: p. 1090]. Organizations that

encourage individual autonomy through flexibility, open
structure and receptivity to innovative ideas are categor-
ized as organic organizations. Conversely, bureaucratic or
mechanistic organizations have rigid structures, place
strong emphasis on rules and regulations, have an elaborate
hierarchy and low participation of its members in decision-
making. Organic organizations supposedly increase satisfac-
tion and morale while bureaucratic organizations have low
morale and dissatisfaction. There is considerable support
for this hypothesis (Brief and Aldag; Dewar and Werbel;
Locke; Blau and Scott; Crozier; Hage Hall; Hickson). It is
also generally accepted that a high degree of upward influ-
ence increases satisfaction (Blumberg) and that larger
organizations have lower morale and individual job satisfac-
tion because their size requires impersonality of relation-
ships, decreases a sense of personal importance in the
organization and creates a demand for formalized and rigid
control (Cummings and ElSalmi; Indik; Porter and Lawler).
[Ref. 11: pp. 1089-1091]

A recent study done by Zeitz (1983), using question-
naires from 2,335 managers in twelve industrial companies,
tested these hypotheses and found that the strongest deter-
minant of satisfaction was the degree of structuring of
activities. This relationship, however, was positive (ie.
satisfaction is higher in more highly structured roles)
which does not follow previous findings. Task variability
and perceived openness to information also positively influ-
enced satisfaction. [Ref. 11: pp. 1097-1098]

Hopkins (1983) looked at job satisfaction among
state employees. The study used 23 job facets to reflect
the multidimensional nature of job satisfaction. Hopkins
formulated two distinct models to explain satisfaction. The
job design model used job characteristics as the major
determinants of the individual's satisfaction with his/her

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job. The independent variables in this model were a job
quality index, indicators of the nature of job effort
required (skill in use of hands) and indicators of the
nature of resources available (coworkers help and
authority). The covariates of this model were life view,
organizational committment and education level. The results
of the multiple classification analysis of this model were
that all the independent variables were significantly
related to job satisfaction and explained 20% of the varia-
tion in satisfaction. Workers who had higher job quality,
more resources and who had jobs that required less skill in
using their hands were the most satisfied. [Ref. 12: pp.
101-103]

Hopkins' other model was a job environment model.
The job environment is defined by individuals or groups
other than the employee but it acquires meaning when inter-
preted through the employee's own perceptual apparatus.
This model used fairness of promotion, an index of working
conditions, a measure of how much the individual's work is
done independent of supervision and job mobility within the
state as independent variables. All five variables were
significantly related to job satisfaction. This model also
contained the three individual characteristics as covariates
and was able to explain 24% of the variation in job
satisfaction. [Ref. 12: p.105-107]

Environmental events can affect an individual's
perception of his/her work experience and therefore affect
job satisfaction. Symbolic interactionists emphasize the
importance of understanding how people interpret events
occurring within their environments (Blumer, 1969; Lauer and
Handel, 1977) [Ref. 13: p. 1014]. There has been research
into the link between local economic conditions and an indi-
vidual's job satisfaction. Hulin (1966) found that satis-
faction was higher in communities that had large slum
areas, inferring that one element of an individual's

assessment of his/her own situation is made by comparing
that situation with alternatives available [Ref. 13: p.
1016].

Maguire (1983) used local unemployment levels to
attempt to determine the relationship between an individu-
al's environment and attitude. Results showed that neither
unemployment rate nor perceived consequences of unemployment
were good predictors of job satisfaction [Ref. 13: p. 1022].
Education, which is usually a good predictor of satisfac-
tion, was not a good predictor in areas of high unemploy-
ment. Although perceived consequences of unemployment was
not a significant predictor of satisfaction, it approached
significance in a context of high unemployment. Therefore,
under conditions of high unemployment, the more commonly
used predictors of satisfaction became weaker and perception
of the consequences of unemployment became stronger. Many
studies have maintained that education is negatively corre-
lated with satisfaction, but not all research agrees.
Janson and Martin (1982) found no relationship and Glenn and
Weaver (1982) found a positive relationship which they
explained as deriving from the higher level of extrinsic
rewards that tend to accompany higher education levels.
[Ref. 13: p. 1027]

    4. Literature on Job Satisfaction and Race
        Research on job satisfaction and race is character-
ized by conflicting results. Some studies have reported
little or no differences between racial groups in reported
job satisfaction (Gavin and Ewen, 1974; Jones et al., 1977;
Katzell, Ewen and Korman, 1974; Weaver, 1977) [Ref. 14: p.
300]. Others have concluded that blacks have lower job
satisfaction than whites (Slocum and Strawser, 1972; Moch,
1980; Milutinovich, 1977), while there are studies that show
that blacks have higher satisfaction than whites in compa-
rable jobs (Brenner and Fernsten, 1984). The important
issue is not in discovering and documenting race-related

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differences but rather in understanding their sources and the effect such differences have on performance and other behavoirs (Kirkpatrick, 1973). [Ref. 15: p. 6]

Economic theory maintains that job satisfaction is a function of the individual's full wage. Full wage is defined as the sum of the money wage (W) and the nonpecuniary elements of the job , expressed in equivalent monetary terms. This can be represented by the equation:

$$S = a + bW + cX$$

where X is the vector of the individual's characteristics and the coefficients of the variables in X (c) measure the effects of those characteristics in two ways: 1) through their direct effect on job satisfaction and/or 2) through their effect on the nonpecuniary elements of the job. [Ref. 16: p. 295]

There are a number of explanations of race-related differences in job satisfaction, that are common in the literature. Cultural explanations attribute the differences to the values, beliefs and psychological states that contribute to how members of different subgroups will respond to their work experience (Alper, 1975; Bloom and Barry, 1967; Jones et al., 1977; Slocum et al., 1971; Slocum and Strawser, 1972). An analog to this theory is the concept of frame of refernce. Different subcultures develop different frames of reference which influences the individual's perceptions of the job and also affects which aspects of the job will be satisfying and dissatisfying. [Ref. 14: p. 299]

Structural explanations of varying job satisfaction by race maintain that it is a function of how the members of different racial groups are treated by the organization, by supervisors and by coworkers. Some studies have identified fewer promotion opportunities for black employees as the reason for their lower reported satisfaction (Smith et al., 1974; Brown and Ford, 1977; Fields and Freeman, 1972; Goode,

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1970).  Supervisor bias exhibited in performance evaluations
has also been credited with causing differential satisfac-
tion levels (Hamner, Kim Baird and Bigoness, 1974; Katz and
Greenbaum, 1963; Katz, Roberts, and Robinson, 1965).
[Ref. 14: p. 300]

Social and social psychological factors have been
examined for their ability to predict job satisfaction.
Social factors include how employees of different races are
treated by coworkers and the amount of inclusion or exclu-
sion the individual experiences within the work center
(Moch, 1980).  Perceived relative deprivation, which is the
extent to which the individual considers his/her present job
to be the best that he/she could obtain, has also been
analyzed (Jones et al., 1977; Gavin and Ewen, 1974; Moch,
1980).  [Ref. 14: p. 300]

Michael K. Moch (1980) conducted a study that incor-
porated both cultural and structural perspectives and meas-
ures of social factors and perceived relative deprivation.
The study was conducted in a packaging plant in the southern
United States.  Moch found that race alone accounted for 53
percent of the variation in level of job satisfaction.
Employees who considered social relationships at work to be
very important, who were socially intergrated and did not
think that they could find a comparable job elsewhere,
reported the highest level of satisfaction.  [Ref. 14: p.
303]

Another possible explanation for racial differences
in job satisfaction derives from differences in individual
motivational structure.  Arvey and Musio (1974) found that
extrinsic rewards (eg. high pay, security) were more impor-
tant to culturally disadvantaged employees while advantaged
employees placed more emphasis on intrinsic factors
[Ref. 15: p. 6].

Discrimination in the labor market may cause blacks
to have lower aspirations than comparable whites.  Bartel

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(1981) found that although blacks had lower wages and lower nonpecuniary job returns, they still reported higher job satisfaction. She attributed this to the effect of discrimination on the individual's aspirations, which causes blacks to be satisfied with less [Ref. 17: p. 302].

The willingness to express dissatisfaction will affect the measurement of job satisfaction. Education and experience on the job might directly affect job satisfaction by increasing the individual's willingness to express dissatisfaction. Borjas (1979) maintained that although union membership tends to raise an individual's money wage and nonpecuniary benefits, it can also reduce measured job satisfaction because unions lead to politicizing of the workforce and greater expression of dissatisfaction [Ref. 17: pp. 295-296]. The extent to which blacks and other minorities have more experience on the job and are union members will affect their reported job satisfaction.

In an attempt to explain the conflicting results of previous research, Brenner and Fernsten investigated job satisfaction among black and white clerical workers. Using an adaptation of a job-facet instrument, they compared the respondent's fulfillment ratings on twenty-five different job characteristics. They found that blacks perceived greater fulfillment on every job characteristic and that twenty-two of the twenty-five were statistically significant [Ref. 16: p. 644]. Although the subjects of this study were all in similar jobs with similar extrinsic and intrinsic rewards, blacks reported greater satisfaction. Brenner and Fernsten hypothesized that this might be explained by the social psychological factors (relative deprivation) that Moch (1980) found important. Now that many blacks are attaining job parity with whites, their past deprivation causes them to perceive their rewards as more positive than do the whites [Ref. 16: p. 646].

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Jones, James, Bruni and Sells (1977) looked at U.S.
Navy enlisted personnel to examine differences between
black's and white's job-related satisfaction. Differences
were explored in the form of individual needs and through
differences in the individual's perception of work condi-
tions. They found that when black and white sailors in the
same divisions aboard the same ships were compared, blacks
were slightly older, had received lower GCT scores, had
lived in larger cities and in smaller houses. Black sailors
also reported being in the Navy longer, had higher self-
esteem scores, had completed fewer advanced training schools
and were more likely to be working in more routine, non-
technical ratings. There were no differences between black
and white sailors on general satisfaction. Blacks did
report higher levels of satisfaction with regulations
regarding appearance and opportunities to get a better job
in the Navy (extrinsic factors). Blacks were more likely to
perceive the Navy as having a desireable growth potential.
White sailors reported higher intrinsic needs. [Ref. 15:
pp. 10-11]

Although discrimination was not directly addressed,
blacks did not perceive differences in treatment by
superiors. For both blacks and whites, satisfaction was
highest in jobs that were perceived as challenging; blacks
who perceived their work as challenging were more likely
than whites to report higher needs. Selection bias can be a
problem here if the blacks who qualify for the advanced
training needed for the more challenging jobs had stronger
needs originally. The finding that blacks scored higher on
measures of professional and organizational esprit, higher
satisfaction with pay and the lack of differences in promo-
tion rates , supports the hypothesis that blacks have lower
expectations because of discrimination and relative depriva-
tion in the labor market. [Ref. 15: p. 15]

## C. MEASUREMENT OF JOB SATISFACTION

Many studies of job satisfaction use questionnaires to understand the relationships between different variables and total satisfaction. One highly regarded instrument is the Cornell Job Descriptive Index (JDI). Subtopics on the index are pay, people, supervision, promotion and work. There are a number of drawbacks in the use of ready made instruments. They do not take into account aspects of the situation being studied that are unique. Also, there is the problem of repondents giving answers on any questionnaire that are socially acceptable rather than his/her true feelings. Another problem is that people are influenced by the way a question is phrased and will give different answers depending on the wording. Considering the fact that rarely are all questionnaires filled out and returned, there is the possibility that the group of people who do not return the forms differ in some way from the people who do return the questionnaire. [Ref. 1: p. 4]

An area that has received attention in the study of job is the apparent lack of correlation between global measures of satisfaction and the measures of satisfaction with specific job characteristics. Global measures are useful in measuring the overall satisfaction for a segment of the labor force or over time. A general assessment of personal job satisfaction may be used by individuals when they make the decision to stay or leave an organization. When the focus shifts to an organization attempting to make improvements in employee job satisfaction or when attempting to predict future turnover, specific job characteristics need to be examined. [Ref. 18: p. 578]

Empirical data shows that general job satisfaction and the sum of satisfaction with job facets are not highly correlated. One possible explanation is that there are facets missing from the instruments that are presently in use, that an individual considers when reporting his/her own

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overall job satisfaction.  If these instruments do exclude
some job facet variables, then the sum of the facets can not
be expected to equal the overall satisfaction as Locke
(1969) proposed and as has been generally accepted.  Many
researchers have acknowledged this lack of fit between the
global and facet measures of job satisfaction but have
attributed it to: (1) unreliability of single-item measures;
(2) that the two types of measures are inherently non-
equivalent or (3) that the non-equivalence may be due to
scoring methods and/or from using linear statistical models
when nonlinear models should be used to combine the facets.
[Ref. 18: p. 579]

Scarpello and Campbell (1983) approached this problem.
They felt that there was no evidence that overall satisfac-
tion measures were unreliable.  They also pointed out that
the literature did not support the suggestion made by Smith,
et al., (1969) that the lack of fit between the two measures
was caused by the individual using two different frames of
reference when responding to each type of question.  Smith,
et al., reasoned that the person uses a relative frame of
reference that focuses on currently available alternatives
when answering job facet questions and an absolute frame of
reference when responding to a measure of overall
satisfaction.  [Ref. 18: p.579]

There is also little evidence to support the contention
that the nonequivalence of the measures is caused by the use
of linear instead of nonlinear models.  Aldag and Brief
(1978) used the overall satisfaction scale from the Yale Job
Inventory as the criterion variable and the scales in the
Job Descriptive Index (JDI) as predictor variables.  They
tested a compensatory linear model, where a high score on
one facet compensates for a low score on another.  They also
tested a conjunctive model which is a nonlinear "multiple
hurdles" approach and a disjunctive model which is nonlinear
and tests whether a high score on one facet is high enough

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to outweigh a low score on another facet. Aldag's and Brief's conclusion was that none of the models tested were superior to the others. [Ref. 18: p. 580]

Ferratt (1981), in research similar to that of Aldag and Brief, concluded that the linear compensating model and the simplest item scoring methods were as good or better models for job satisfaction research as the nonlinear models that he tested. He found no strong evidence that the choice of statistical method or weighting of the job facets' importance were responsible for the low correlations between facet satisfaction and overall satisfaction. [Ref. 18: p. 581]

Scarpello and Campbell tested the hypothesis that an individual considers a number of content and process variables related to career concerns such as satisfaction with life off the job and decisions made prior to and concurrently with entry into the job that are not measured by any one job satisfaction instrument. Their research was conducted by interviews in which employees were asked what they considered when the assessed their own job satisfaction. Their results argued against the common practice of summing facet satisfaction measures when measuring overall satisfaction. They concluded that the low correlation between overall measures was related to the ommission of variables that people consider when measuring their overall job satisfaction and also to differences in the meaning that respondents attributed to particular items on the questionnaires. [Ref. 18: p. 597]

Scarpello and Campbell found that global job satisfaction measures included satisfaction with occupational choice, satisfaction with life off the job and job satisfaction. In their study, the overall satisfaction measure was the more inclusive measurement compared to the summation of job facet satisfaction. By interviewing people in different organizations but in similar functional departments, they

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determined that people in similar jobs attributed the same definitions to job facet questions. The importance that people attribute to different job facets in measuring their overall satisfaction, varied among individuals. [Ref. 18: p. 598]

D. SUMMARY

The review of literature documents that job satisfaction varies among individuals for many reasons, one of them being race. The hypothesis of this thesis is that job satisfaction for military officers will vary systematically by race.

Changing demographics (ie. fewer numbers of eligible personnel) due to the 'baby bust' of the 1970s and the reliance on volunteers to man the Armed Forces has made the issues of recruiting and retention important to the military. The cost of training new personnel coupled with the fact that the military is a closed labor market where most members enter at the lowest rank, is forcing the military to consider variables such as job satisfaction in the formulation of policies and plans for the future. An understanding of the elements that determine an individual's satisfaction will give military policy-makers greater control over behaviors such as recruiting and retention and will allow them greater control and understanding of the forces inherent in manpower requirements determination.

Chapter two will be a bivariate analysis of the biodemographical characteristics, job characteristics, opinions and perceptions of military officers in an attempt to identify variables that are significantly different by race and to profile the different racial groups. Chapter three will formulate a multivariate model using selected variables from the results of chapter two, that will predict/explain an individual officers degree of job satisfaction.

# II. PRELIMINARY ANALYSIS

## A.  DATA

The data used in this research was the 1978 Department
of Defense Survey of Officers and Enlisted Personnel which
is composed of four questionnaires.  Forms one and two were
administered to enlisted personnel; forms three (economic
variant) and four (quality of life) were administered to
officers [Ref. 20].  To derive a sample that was homogeneous
with respect to such factors as rank, time in service and
age, the population analyzed in this research was restricted
to Army, Navy, Air Force and Marine Corp officers with the
ranks of 01 through 03, who were within their initial period
of obligated service.

Small sample size prevented the inclusion of Hispanic,
American Indian and Oriental officers in the analysis.  Only
blacks and caucasians were utilized as racial groups.  The
useable sample size varied depending on how many respondents
answered each question.  Most questions were answered by
between 100 and 133 black officers (all services combined)
and between 2000 and 2300 caucasian officers (all services
combined).

Table I shows the number of black and caucasian officers
who were on active duty in 1978.  The small number of black
officer respondents in the 1978 Rand Survey was  a function
of the small number of black officers in the military.  The
Army had the highest percentages of black officers in all
ranks.  The Navy had the fewest black officers.  The black
officers who were on active duty in September 1978 were
heavily concentrated in the lower ranks.  This was probably
due to relatively few blacks entering the military so that
there were not many who had been in the service long enough
to have reached the higher ranks.  The number of black offi-
cers in the Air Force dropped from 7.5% in the 01-02

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TABLE I

OFFICERS ON ACTIVE DUTY SEPT 1978

| Rank | 01-02 | 03 | 04 | 05 | 06 | 07-08 | 09-010 | Total |
|------|-------|----|----|----|----|-------|--------|-------|
| Service | | | | | | | | |
| ARMY N | 22059 | 27773 | 15983 | 10904 | 4406 | 384 | 46 | 81555 |
| % black | 9.78 | 6.19 | 4.90 | 5.24 | 4.34 | 4.43 | 2.17 | 6.67 |
| NAVY N | 18331 | 17086 | 11757 | 7580 | 3577 | 225 | 41 | 58597 |
| % black | 3.78 | 2.43 | .817 | .528 | .727 | .889 | 2.44 | 2.17 |
| A.F. N | 18650 | 39817 | 17957 | 12314 | 5039 | 309 | 51 | 94137 |
| % black | 7.49 | 3.33 | 2.57 | 1.58 | 1.51 | 2.59 | 0 | 3.68 |
| M.C. N | 7727 | 4596 | 2620 | 1492 | 583 | 56 | 9 | 17083 |
| % black | 5.37 | 3.44 | 1.11 | .469 | .172 | 0 | 0 | 3.57 |
| TOTAL N | 66767 | 89272 | 48317 | 32290 | 13605 | 1001 | 147 | 251372 |
| % black | 6.98 | 4.05 | 2.84 | 2.51 | 2.16 | 2.70 | 1.36 | 4.29 |

Source: Defense Manpower Data Center, Monterey, California

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category to 3.3% in the 03 category. This gives the impression that the Air Force had recently begun to recruit more black officers since there were low percentages of black officers in the other ranks as well (under 3%). The Navy figures dropped to below 1% of black officers starting with the rank of 04. This may be caused by black Naval officers leaving the military at the end of their obligated service as well as the few blacks entering the Navy.

Blacks were almost totally excluded from the officer corps of all the services until after World War II. Black officers have tended to be concentrated in certain jobs such as supply and procurement and administration. These areas are not considered part of the mainstream and, in some cases, do not offer the same career progression opportunities [Ref. 19: p. 59].

In 1976, blacks constituted 24.4% of the enlisted Army and 16.8% of all the services. By 1981, these figures were 32.2% for the Army and 21.6% of all the Armed Forces. There is an ongoing debate with one argument being that the higher percentage of blacks in the military than there are for that age group in the general population (approximately 12%) is good because military service provides education, training and other opportunities to help improve socio-economic status. An argument that opposes this overrepresentation of blacks in the military is that in the event of a conventional war, black casualties would be disproportionately high. The black soldiers are most heavily concentrated in the combat areas where, in 1981, approximately one of every three Army combat soldiers and one in every five Marines was black. [Ref. 19: p. 57].

The issue of underrepresentation of blacks in the officer corps has not been the topic of debate like the overrepresentation in the enlisted ranks has been. One reason for this may be that the proportion of black officers in all services combined is close to the proportion of all

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black college graduates in the relevant age group. In 1979,
5.3% of all male college graduates ages 21 to 29, were
black. Another reason that the issue may not have received
much attention is that the proportion of black officers has
been steadily rising [Ref. 19: p. 61].

As affirmative action efforts were put into practice,
the competition for minority college graduates became
stronger. Civilian firms were competing with the military
for the small numbers of black college graduates, particu-
larly with technical or business degrees. Recruiting of
blacks for the officer corps was difficult. As a group,
black college graduates are considered to be more suspicious
of whites and to perceive more discrimination in the black
struggle for equal rights than do other members of the black
community. In the late 1970s, a military career provided
higher earnings than the average black college graduate
could expect in the civilian sector, yet there was still a
lack of interest in the Armed Forces. This suggests that
there were factors other than economic considerations, that
were important to blacks who were qualified to serve as
military officers [Ref. 19: p. 61].

B.   BIVARIATE ANALYSIS
A number of the questions appeared on both forms three
and four of the 1979 survey. In these instances, statistics
for both questions are included in the tables. Factors were
tested for significance at the .05 level, using either
Chi-square tests or tests of means.

The bivariate analysis is conducted in five sections
 individual characteristics, military background and service
plans, current military assignment, finances and housing and
equal cpportunity and race relations. Table II shows the
results of the bivariate analysis conducted on the variables
concerned with the background history of the respondents.
The sex distribution was found to be significantly different
for black and white officers on form three. In all

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## TABLE II
### INDIVIDUAL CHARACTERISTICS BY RACE

| Description | Form | prob value | mean black | caucasian |
|---|---|---|---|---|
| Age entering service | 3<br>4 | .161<br>.908 | 21.9<br>21.6 | 21.5<br>21.6 |
| Age on last birthday | 3<br>4 | .279<br>.422 | 26.1<br>25.8 | 25.8<br>26.0 |
| Sex | 3<br>4 | .031<br>.052 | | |
| Marital status when entering service | 3<br>4 | .015<br>.325 | | |
| Marital status now | 3<br>4 | .140<br>.936 | | |
| Years married | 3<br>4 | .308<br>.347 | 5.0<br>5.0 | 4.2<br>4.4 |
| Age of spouse | 3 | .759 | 26.1 | 25.9 |
| Spouse's military exp. | 3 | .553 | | |
| Spouse's education level | 3<br>4 | .365<br>.976 | 15.0<br>14.9 | 14.8<br>14.8 |
| Your education level when entered service | 3 | .427 | 15.4 | 15.3 |
| Your education level now | 3<br>4 | .786<br>.535 | 16.5<br>16.5 | 16.5<br>16.5 |
| Degree held entering svc. | 3<br>4 | .934<br>.364 | | |
| Degree held now | 3<br>4 | .099<br>.921 | | |
| Education level of father | 4 | .001 | 10.0 | 13.8 |
| Education level of mother | 4 | .001 | 11.4 | 13.2 |
| Number of family who have military experience | 4 | .247 | 1.4 | 1.3 |
| Number of dependents | 3<br>4 | .001<br>.715 | .7<br>.5 | .4<br>.5 |
| Residence at 16 yrs old | 4 | .001 | | |

services, the percentage of minority female officers was higher than the percentage of minority male officers. Of the 128 black officers who answered this question on form

three, 37 were female (28.9%). The sex variable on form
four was almost significant. Of the 137 black officers who
answered this question on form four, 39 were women (28.5%).

The marital status of military members will affect their
attitudes toward the service especially in areas such as
military rotation policy and work and deployment schedules.
It may also affect an individual's decision whether to
remain in the service or leave. Marital status when the
respondent entered the service was significantly different
for black and white officers on form three only. A factor
may be significantly different for the two groups on one of
the questionnaire forms and not on the other, because of the
method that was used to determine which form was sent to
which military units. Another explanation is that using an
alpha level of .05, the results can be expected to be incor-
rect 5% of the time. There is a difference between what is
found to be statistically significant and what can be
accepted as a practical difference. Although a variable may
be found to be statistically significant, the difference may
not be large enough to have any practical application to the
analysis. Some of the factors, such as marital status, that
were found to be significantly different on one of the
survey forms and not on the other will most likely fall into
this category.

Marital status was formatted using three categories, 1)
married, 2) divorced, separated or widowed, 3) single, never
married. A smaller number of black officers were married
when they entered the military; 17.8% of the black officers
and 21.4% of the white officers were married when they
joined the service. A larger percentage of black officers
reported being divorced, separated or widowed when they
entered (4.7% of the black officers and 1.5% of the white
officers).

The other background characteristics that were found to
be significantly different for black and white officers

dealt with education of their parents, residence at 16 years old and number of dependents. The number of dependents excluded self and spouse. Black officers reported more dependents. The education level of both the mothers (or female guardians) and fathers (or male guardians) of black officers was significantly lower than those of the white officers. The education levels of the officers themselves were not significantly different however, either at the time of service entry or at the time that the survey was taken.

Individuals entering the service can be expected to bring attitudes and experiences that , in part, will be affected by the geographical region and type of community that they come from. The type of residence of the respondents when they were sixteen years old was significantly different for black and white officers. There were seven categories ranging from a large city of 250,000 population or more, to a farm or rural area. Suburbs of large, medium and small cities were also categories. A larger proportion of black officers reported living in large cities (21.2%) than did the white officers (13.6%). More white officers (20.3%) reported living in the suburbs of a large city than any other of the community types. Only 5.9% of the black officers reported living in the same suburbs. Combining the categories of large and medium city suburbs, 27.6% of the white officers fell into these categories while the same two categories contained only 10.2% of the black officers.

Table III addresses the military background and service plans of the respondents. The survey questions for commissioning source included 13 different categories. Due to the lack of black officers in some of the categories, I limited the categories to four, 1) Academy Graduate, 2) Officer Candidate School, 3) Regular ROTC and 4) Scholarship ROTC. The white officers were concentrated in the Academy Graduate and Scholarship ROTC categories (52%) while the majority of black officers received their commissions

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## TABLE III
## MILITARY BACKGROUND AND SERVICE PLANS BY RACE

| Description | Form | prob value | mean black | caucasian |
|---|---|---|---|---|
| Commissioning Source | 3 | .001 | | |
| | 4 | .001 | | |
| Present duty station | 3 | .111 | | |
| Intended years of service | 3 | .929 | 12.6 | 12.5 |
| | 4 | .604 | 12.9 | 12.5 |
| Expected final paygrade | 3 | .956 | | |
| | 4 | .101 | | |
| Chances next tour in undesirable location | 3 | .234 | | |
| | 4 | .529 | | |
| Chances of promotion compared to peers | 3 | .867 | | |
| Would you stay if promotion chances decreased 50% | 3 | .118 | 2.5 | 2.9 |
| Unused leave days | 3 | .033 | 28.9 | 25.1 |
| Leave days lost | 3 | .676 | .8 | 1.0 |

through either Officer Candidate School or Regular ROTC
(71%). The data shows that white officers are far more
likely to be commissioned through programs that the military
pays for while the black officers are paying for their own
college education prior to receiving a commission. This
question was answered by 100 black and 1547 white officers.
The proportion of black officers in the sample is 6.1%. It
would be expected that black officers would comprise approx-
imately 6 to 7% of the respondents in each procurement
category. However, black officers make up twice that
percentage of officers who are commissioned through the
Regular ROTC program (12.9%) and approximately half that
percentage of those entering the military through the
service academies (3.1%) and through the Scholarship ROTC
program (3.8%). The issue of how an officer receives
his/her commission is important. Providing financing for an

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education and subsequent commission will allow some people to become officers who could not do so otherwise. A paid for education is also a method of encouraging individuals or groups to join the military as officers. Commissioning source also carries a particular status with it. Officers who received their commissions through one of the service academies have the highest status and also have the best chances for promotion to flag rank.

Young black and white officers do not differ in the number of years that they intend to stay in the military or in the paygrade that they expect to be in when they do leave. If promotion chances were reduced by 50%, both black and white officers were prone to leave the military, reporting between only a 20% to 30% chance of staying under those circumstances.

The number of unused leave days was significantly different for black and white officers. Black officers reported more unused leave (28.9 days) than white officers (25.1). This difference in unused leave may be caused by a tendency of black officers to not take as much leave as the white officers if they perceive this as a way of compensating for any handicap they might have because they are black. Conversely, this difference of almost four days of unused leave may not be enough to be practically different although it is statistically significant. There was no significant difference by race of what the individual perceived to be his/her promotion opportunities in comparison to peers. This analysis is restricted to junior officers, 01-03. Almost all these officers are promoted according to a designated Department of Defense schedule that is virtually unaffected by ability or fitness reports. Promotion for these officers is driven by time in service.

The black and white officers were similar in many of their personal characteristics and opinions. This is probably attributable in a large part to the selection

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process inherent in becoming a military officer. This
selection process requires a college education and restricts
entrants by age. The data follows these two requirements
with the finding that the officer respondents were statisti-
cally the same age and had achieved the same level of educa-
tion when they first entered the military. Since the
officers were statistically the same age, it follows that
their spouse's were also the same age. Their spouse's also
had statistically the same levels of education. The common
college experience also helped make the respondent's opin-
ions and intentions more similar than they might have been
otherwise. The results of the research done on this popula-
tion may not be applicable to other populations.

Table IV contains variables concerning the respondents
present military assignment. When asked how much they
considered drug use, alcohol use, crime and racial tension
to be problems at their current commands, only the percep-
tion of racial tension was significantly different for the
black and white officers. The degree of problem was, 1)
serious problem, 2) somewhat of a problem, 3) a slight
problem and 4) no problem. No problem with racial tension
at their commands was reported by 50% of the white officers.
Approximately half that number, 26.1% , of the black offi-
cers felt that there was no problem. A serious problem with
racial tension was reported by 10.9% and 2.8% of the white
officers.

While there was not a significant difference between
black and white officers in the number of location choices
that they had submitted prior to receiving orders to their
present duty station (60% of the black officers and 58.4% of
the white officers submitted three or more choices), there
was a significant difference in the location choice that
they received. Almost twice as many black officers (42.0%)
as white officers (23.8%) reported not being assigned to

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# TABLE IV
## CURRENT MILITARY ASSIGNMENT BY RACE

| Description | Form | prob value | mean black | caucasian |
|---|---|---|---|---|
| How much problem is: | 4 | | | |
|   Drug use | | .478 | | |
|   Alcohol use | | .891 | | |
|   Crime | | .937 | | |
|   Racial tension | | .001 | | |
| at your current location | | | | |
| No. of location choices submitted prior to assignment | 4 | .873 | | |
| Choice received | 4 | .001 | | |
| Chances of next assignment being undesirable location | 3 4 | .051 .912 | 3.9 4.6 | 4.5 4.6 |
| Feelings about duty station | 3 4 | .001 .001 | 4.4 4.4 | 5.0 5.0 |
| Morale at duty station | 4 | .019 | 4.0 | 3.7 |
| Personnel readiness | 4 | .428 | 5.1 | 5.0 |
| Equipment readiness | 4 | .002 | 5.0 | 4.5 |
| How much time spent out of primary MOS | 3 | .570 | | |
| No. people in primary work unit | 4 | .826 | | |
| No. of minorities in primary work unit | 4 | .005 | | |
| No. hours on call/alert status, last 7 days | 3 | .219 | 18.1 | 21.3 |

any location of their choice. Their first choice location was reported as being received by 46% of the white officers and 26.8% of the black officers.

Feelings about current location were measured on a Likert scale of 1 (very dissatisfied) to 7 (very satisfied). There was a significant difference between black and white officers on both forms. In each case, black officers reported lower satisfaction than white officers.

The morale of military personnel at their current location was also measured on a seven-point Likert scale. Respondents chose 1 if they considered morale very low through 7 if morale was very high. Black officers perceived

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morale as higher (4.0) than white officers (3.7). This
variable was statistically significant.

The respondents evaluated the ability of the military
personnel on their base to perform their wartime mission and
the ability of important combat equipment to perform in
wartime. These were also measured on a seven point Likert
scale. There was no significant difference between the
black and white officers evaluation of the military
personnel on their bases. There was a significant differ-
ence between their opinions of the combat equipment. The
black officers rated the equipments ability higher (5.0)
than did the white officers (4.6).

There was no significant difference in the numbers of
personnel in the respondents primary work groups. There was
however, a difference in the number of minority service
members in their primary work units. This question had six
categories on the survey which were reduced to four for this
research. The categories reduced categories were, 1) most
or more than half, 2) about half, 3) some or a few and 4)
none. Over twice as many black officers (12.7%) reported
that most or more than half of their primary work units were
members of minority groups than did white officers (5.9%).
Since officers are generally in charge of their primary work
units, this finding could be a result of black officers
being systematically assigned to work units that are predom-
inantly minority because they might be assumed to be more
effective with such a group or because of a presumed reluc-
tance of white enlisted personnel to take orders from black
officers.

Table V deals with the respondents financial and housing
situation. A spouse's earnings can affect a service
member's decision to stay in the military. Satisfaction
with military life will be affected if the spouse is
employed and is opposed to the military rotation policy. A
working spouse or other financial assets can provide income

## TABLE V

### FINANCES AND HOUSING BY RACE

| Description | Form | prob value | mean black | caucasian |
|---|---|---|---|---|
| Spouse's earnings 1978 | 3 | .959 | $4189 | $4156 |
| Earnings other sources | 3 | .001 | $ 87 | $ 310 |
| Interest on stocks/bonds | 3 | .001 | | |
| Total family gross income | 3 | .011 | $13910 | $15427 |
| | 4 | .006 | $14221 | $15757 |
| No. of hours you worked in civilian job (off duty) | 3 | .053 | .234 | .484 |
| Amount earned in same | 3 | .759 | $1109 | $1342 |
| Outstanding debt | 3 | .001 | | |
| Total assets and cash | 3 | .001 | | |
| Comparison of financial situation w/ 3 yrs ago | 3 | .001 | | |
| Type of housing you live in now | 3 | .031 | | |
| Satisfaction with housing | 3 | .250 | 4.8 | 5.0 |
| Estimated cost of civilian housing in your area | 3 | .332 | $315 | $334 |
| Amount paid for rent and utilities | 3 | .015 | $258 | $296 |
| How many homes owned | 3 | .103 | | |
| Home purchase price | 3 | .646 | $50767 | $44314 |
| Mortgage payment | 3 | .310 | $346 | $381 |
| Special pay received | 3 | .001 | | |
| Flight pay | 3 | .001 | | |
| Jump pay | 3 | .001 | | |
| Amount spent in exchange each month | 3 | .345 | $78 | $69 |
| Amount spent in commissary each month | 3 | .321 | $95 | $102 |
| Amount spent in civilian market each month | 3 | .915 | $48 | $49 |
| Unreimbursed moving expenses | 4 | .102 | $287 | $355 |

while the military member makes the transition to a civilian
job if he/she chooses to do so.  Spouse's earnings for 1978
were not significantly different for black and white

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officers.  However, the amount of money received from other
sources such as social security, alimony, child support and
interest or dividends on stock and bonds, was significantly
higher for the white officers ($310 per month) than for the
black officers ($87 per month).  More than twice the
percentage of white officers (64.1%) reported receiving
interest or dividends on stocks and bonds than did black
officers (30.7%).  Total gross family income was also higher
for the white officers.

The amount of outstanding debt that the respondents
reported was significantly higher for the black officers
than it was for the white officers.  Total value of assets
and cash was significantly higher for the white officers
than for the black officers.

The respondents were asked to compare their present
financial situation to what it was three years ago.  At that
time, of the officers included in this research, many of the
officers with the ranks of 01 and 02 would not have been in
the service (unless they were enlisted personnel prior to
being commissioned).  There were five category choices: 1)a
lot better now, 2) somewhat better now, 3) about the same,
4) somewhat worse now, 5) a lot worse now.  While the
percentage of black officers who answered this question was
5.4% of the total sample, 17.1% of the black officers
reported that their financial situation was 'a lot worse
now' than it had been three years ago.  The financial situ-
ation was either a lot or somewhat better than it had been
three years before for 79.4% of the black officers and 67.7%
of the white officers.  A decrease in the respondents finan-
cial situation can either be caused by the respondent making
less money in his/her present job, a reduction in other
income such as interest or dividends or by the loss or
reduction in a spouse's income.

The categories for current housing were 1) civilian
housing, 2) on board ship, 3) BOQ, 4) onbase military

housing and 5) offbase military housing. The percentages
reporting living onboard ship were 3.3% of the white offi-
cers and 0.8% of the black officers. White officers were
more likely to be living in civilian housing (59.7% of the
white officers and 51.2% of the black officers). Black
officers were more likely to be living in onbase military
housing (26.4% of the black officers and 17.3% of the white
officers). If black officers perceive discrimination in
local civilian housing, they may feel more comfortable in
onbase housing. There was a significant difference between
black and white respondents in the amount of rent and utili-
ties they paid for those living in civilian housing. White
officers paid more ($296) than the black officers ($258).

Military officers receive special pay depending on the
type of duty and training that they have. Pilots receive
flight pay even when they are not in a billet that requires
them to fly; submariners receive sub pay. Special groups as
these also receive bonuses as encouragement to remain in the
military since their specialized training is easily transf-
erable to civilian (better paying) jobs. No special pay of
any type was being received by 74.6% of the black officers
and 56.5% of the white officers. Of those receving flight
pay, 2.5% were black. No black officers who answered these
questions reported receiving sub pay. However, 26.1% of the
officers receiving jump pay were black.

Table VI is concerned with the areas of equal opportu-
nity and race relations. The respondents were asked how
often members of their own race exhibited different racially
oriented behaviors. The five choice categories were: 1)
very often, 2) often, 3) sometimes, 4) seldom and 5) never.
The officers opinion of how often people of their own race
complain to each other that members of other racial groups
receive better treatment in the military, was significantly
different by race. That this occurred seldom or never was
reported by 74.5% of the white officers and 58.1% of the

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TABLE VI

EQUAL OPPORTUNITY AND RACE RELATIONS BY RACE

| Description | Form | prob value |
|---|---|---|
| How often do people of your race do the following: | 4 | |
|    Complain other races get better treatment | | .001 |
|    Avoid doing things with other races | | .024 |
|    Talk badly or tell racist jokes | | .162 |
|    Talk to each other about problems with other races | | .009 |
| How concerned are leaders about equal opportunity | 4 | .066 |
| Treatment of blacks compared to whites | 4 | .001 |
| Which racial group has best chances for promotion | 4 | .001 |
| Have you personally experienced discrimination in the following areas: | 4 | |
|    local civilian housing | | .001 |
|    local civilian services | | .001 |
|    onbase facilities | | .001 |
|    training/education oppor. | | .001 |
|    promotion opportunities | | .001 |
|    daily duty assignment | | .001 |

black officers. Approximately the same percentage of black and white officers said that the complaint was made very often (2.4%). The divergence between the two groups is noticeable in the "often" category (12.1% of the black officers and 18.8% of the white officers chose this category) and in the "sometimes" category (27.4% of the black officers and 18.8% of the white officers chose this category). It is not an unexpected finding that more black military personnel would complain that other racial groups, particularly white personnel, received better treatment in the services.

The opinions of the officers of how often members of their own racial group avoid doing things with members of other racial groups was also significantly different for the

black and white officers. Black officers reported that
black military members were more likely to avoid doing
things with members of other racial groups than the white
officers reported for their group. This behavoir was not
reported as occurring as much as the previous behavior
(complaining that other racial groups received better treat-
ment). That this occurred seldom or never was reported by
68.5% of the black officers and 80.5% of the white officers.

Although the opinions of the officers of how often
people of their own racial group talk badly about other
racial groups or tell racist jokes, was not significantly
different for the black and white officers, the results are
interesting. The behavior occurred often or very often
according to 8.9% of the black officers and 6.5% of the
white officers. It occurred seldom or never according to
74% of the black officers and 89% of the white officers.
This data infers the existence of pressure in the military
to eliminate any overt expression of prejudice. The actual
removal of discriminatory practices and racism among some
military members is more difficult and takes longer.

The final behavior in this series is whether members of
your own racial group talk to each other about problems in
the military with other races. Of the respondents who
reported that this occurred very often, 20% were black and
the responses were statistically significant by race.

The opinions of the respondents of how important they
thought that equal opportunity and race relations were to
the leaders of their service were not significantly
different for the black and white officers. The majority of
both groups thought that the issues were very or somewhat
important.

Their opinion of how blacks in their service are treated
compared to whites was solicited from the respondents.
There were five possible responses, 1) a lot better, 2)
better, 3) the same as whites, 4) worse, 5) a lot worse.

The responses of the black and white officers were inverse to one another and significantly different for the two groups. Only 27.34% of the black officers thought that both groups were treated the same while 73.64% of the white officers chose this same category. Those who thought that blacks were treated worse that whites were 64.8% of the black officers and 5% of the white officers; 19.6% of the white officers thought that blacks were treated better than whites and 1.6% of the black officers thought the same. The data shows that black and white officers have quite opposite views of how black personnel are treated in the military.

Similar results were obtained concerning who has the best chances for promotion (also significantly different for the two groups). The four choices were, 1) whites, 2) blacks, 3) other minorities and 4) all groups have an equal chance. In the opinion of 74.8% of the black officers but only 16.6% of the white officers, the whites in the military have the best chances for promotion. The majority (65.4%) of the white officers thought that promotion opportunity was equal for all; less than half that percentage of the black officers (23.7%) held the same opinion. Only 0.8% of the black officers thought that blacks had the best chance for promotion while 15.5% of the white officers thought the same.

Personal experience with discrimination was explored in six different areas, local civilian housing, local civilian services, onbase facilities, training and education opportunities, promotion opportunities and in daily duty assignments. There was a significant difference between the black and white officers in all of the six areas. White officers would most likely be reporting discrimination against the military if they answered yes to having experienced discrimination in local civilian housing or services. Black officers would be reporting experiencing discrimination against the military and against blacks. There were so few high

ranking minority officers that it would be difficult for white officers to experience racial discrimination in the military. Although the question did not specify racial discrimination, by 1979, the term discrimination had been used often enough in the context of racial discrimination that it was likely that most respondents interpreted it that way. There were women officers in the sample that affected the answers received on these questions. White female officers would be more likely than white male officers to perceive sex discrimination in the military. Black female officers may experience both racial and sex discrimination. Female officers in the sample would be expected to increase the number of both white and black officers who reported personally experiencing discrimination.

More than twice as many black officers (13.7%) reported experiencing discrimination in local civilian housing compared to the white officers (6%).

Discrimination in local civilian services was reported by 33.1% of the black officers and 7.7% of the white officers. Of the officers reporting discrimination in onbase services, 32% were black. Discrimination in training and education opportunities was perceived by 15.6% of the black officers and 3.1% of the white officers and 20% of the black officers reported personally experiencing discrimination in promotion opportunities, while only 3% of the white officers had personally experienced discrimination in this area. Discrimination in daily duty assignments was reported by 32% of the black officers and 4.8% of the white officers.

Table VII is concerned with the individual's attitudes toward the military and about civilian employment. White officers expected higher civilian earnings if they left the military now than did the black officers. The difference was statistically significant on form three but it was not significant on form four.

## TABLE VII

### ATTITUDES ABOUT JOB CHARACTERISTICS BY RACE

| Description | Form | prob value | mean black | caucasian |
|---|---|---|---|---|
| Expected civilian earnings | 3 | .002 | $17600 | $19300 |
| if I left military now | 4 | .107 | $18700 | $20000 |
| If I left military now civilian job would be better, worse, same, in these areas: | 3 | | | |
| having a say | | .254 | | |
| retirement benefits | | .140 | | |
| medical benefits | | .438 | | |
| interesting/challenging work | | .009 | | |
| wages or salary | | .264 | | |
| immediated supervisor | | .038 | | |
| chances for promotion | | .567 | | |
| training opportunities | | .001 | | |
| people I work with | | .099 | | |
| work schedule/hours | | .020 | | |
| job security | | .340 | | |
| equipment | | .047 | | |
| location | | .896 | | |
| Did you receive job offers in the last 12 months | 3 | .140 | | |
| If left military now, how likely to find good job | 3 | .581 | 8.4 | 8.3 |
| ⌐ay/Benefits of military compared to civilian job | 3 | .368 | | |
| How much do you agree with: | 3 | | | |
| Life in military is what I expected | | .059 | | |
| Military retirement won't be as good in future | | .956 | | |
| Military pay/benefits won't keep up w/inflation | | .232 | | |
| Family would be better off if I took civilian job | | .175 | | |
| Satisfaction with military | 3 | .345 | 4.3 | 4.2 |
| | 4 | .081 | 4.5 | 4.2 |

Comparing military and civilian employment, most respondents thought that the work would be more interesting and challenging in a civilian job. Although not significantly different for the two groups, 74.1% of the black officers and 75.1% of the white officers thought that the pay would be better in a civilian job. Comparisons of promotion opportunities in the military and civilian sectors were not

significantly different by race. There were 57.4% of the black officers and 55% of the white officers who thought that promotion opportunities would be better in a civilian job.

Black officers had reported discrimination in opportunities for training and education. Over half of the black officers (52.8%) thought that they would have better opportunities for training in a civilian job, while 39.1% of the white officers felt the same way. Conversely, 9.3% of the black officers and 23.3% of the white officers thought that training would be worse in civilian employment. There was a significant difference in the opinions of the black and white officers in their comparisons of work schedule and work hours in military and civilian sectors with 72.3% of the white officers and 61.1% of the black officers thinking it would be better in civilian jobs. With the viewpoint that their schedule and hours would be the same was 32.4% of the black officers and 21.1% of the white officers. The comparison of military and civilian job security was not significantly different by race. Both groups considered job security in the military to be superior. Respondents who thought that equipment used on the job would be better in the civilian sector were 98.6% white and 1.4% black which does not contradict the variable where the black officers rated the ability of the combat equipment on their bases higher than did the white officers.

The number of civilian job offers received was not significantly different for black and white officers. Reporting that they had received civilian job offers in the last twelve months were 43% of the black officers and 36.5% of the white officers.

Both black and white officers felt that their chances of finding good civilian employment, were they to leave the military, were better than 80%.

General satisfaction with the military as a way of life was measured on a seven point Likert scale. It was not significantly different for the two groups on either form.

## III. MULTIVARIATE ANALYSIS

### A. INTRODUCTION

The findings from the bivariate analysis were that the black and white officers were similar and did not vary on most of the biodemographical characteristics. This result is, in large part, because of the selection process. Individual's eligible for a commission as a military officer must be a certain age and have a college education (in most cases). The criteria for entering college further serve to make military officers similar to one another. The black officers perceived considerably more discrimination in areas such as promotion opportunities, training and education opportunities and in daily duty assignments. Discrimination is a negative aspect of work and would be expected to decrease the individual's degree of satisfaction with the job. Yet the overall measure of general satisfaction with the military was not significantly different for the two groups. One possible explanation of this counter-intuitive finding is that the individual's evaluation of comparative working conditions in the military and civilian sectors may not carry the same weight (ie. have the same affect) for the black officers as it does for the white officers when they are evaluating their general job satisfaction. Relative deprivation (ie. the individuals' perception of their ability to find good alternative employment) has been docu- mented as a predictor of general job satisfaction. For the black and white officers, however, the assessment was almost identical; both groups thought that they had approximately an 83% chance of finding good civilian employment were they to leave the military now.

The literature indicates that because of the different values, beliefs and frame of reference that different racial groups have, black officers may differ from white officers

in their assessment of job characteristics. They may differ
in both the relative importance that these job characteris-
tics will have and in the relative effect that these charac-
teristics will have on the officer's evaluation of overall
satisfaction. The bivariate analysis suggests that the
black and white officers will not differ in this area just
as they did not differ in their biodemographical
characteristics.

B. METHODOLOGY

A comparison of thirteen job facets was chosen to
further test the differences/similarities between the black
and white junior officers. It was decided that females in
the sample would be responding to the different situation
that they faced in the labor market (particularly in manage-
ment fields) that was unrelated to race. Therefore, since
females constituted approximately 39% of the black officers
and 27% of the white officers, to identify racial and not
sex differences, females were excluded from this portion of
the analysis.

Factor analysis was used on thirteen job characteris-
tics. This statistical method is useful as a means of iden-
tifying any underlying pattern of relationships that might
exist and then reducing the job facets to a smaller set of
factors that can be interpreted as source variables that
account for the observed interrelationships in the data.
[Ref. 21: p. 469]

One type of factor analysis is principal-component anal-
ysis which transforms the variables into a new set of
composite variables that are uncorrelated (orthogonal) to
each other. The composite variables are derived as the best
linear combination of variables (ie. that combination which
will explain more variance in the data as a whole, than any
other combination of variables). The first principal-
component explains the most variance in the data. The
second principal-component is the second best linear

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combination of variables and is uncorrelated to the first. Therefore, the second component actually explains the most residual variance after the effect of the first component is taken into account. Subsequent components explain the most residual variance remaining after the effects of the preceding components have been removed. [Ref. 21: p. 470]

Once the original variables are reduced into factors, the factors are rotated into terminal factors which are easier to interpret. This step is possible because there is no factor structure that is unique; one solution can be transformed into another without violating the assumptions or mathematical properties of the solution. There are many statistically equivalent ways to express the underlying relationships in a given set of data. This analysis used the varimax method of rotation. Varimax concentrates on simplifying the columns of the factor matrix. This is equivalent to maximizing the variance of the squared loadings in each column. [Ref. 21: p. 472]

To use factor analyis is to express a variable as a linear combination of independent variables. Each of the thirteen variables are expressed as dependent variables in a linear regression, with the hypothetical factors explaining these dependent variables. The correlation coefficient between each variable and each factor is referred to as the factor loading. [Ref. 21: p. 473]

Table VIII is the factor matrix for the black male offi-cers. As in the previous chapter, the data was analyzed separately for the black officers and separately for the white officers. Correlation coefficients below .3 were omitted from the matrix to allow easier interpretation of the correlations.

The numbers in the rows are the loadings which represent regression coefficients of the factors that describe a particular variable. Some of the variables load signifi-cantly on only one factor (eg. retirement benefits and

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## TABLE VIII

### FACTOR MATRIX FOR BLACK MALE OFFICERS

| VARIABLE | FAC 1 | FAC 2 | FAC 3 | FAC 4 |
|---|---|---|---|---|
| having a say | .695 | | | |
| interesting & challenging work | .684 | | | |
| opportunity for training | .656 | | | .401 |
| immediate supervisor | .627 | .319 | | |
| chance for promotion | .586 | | | .402 |
| job security | .486 | | .479 | -.382 |
| work schedule/hours | | .783 | | |
| location of job | | .693 | | |
| people I work with | .430 | .600 | | |
| retirement benefits | | | .887 | |
| medical benefits | | | .816 | |
| salary | | | | .775 |
| equipment | | .458 | | .757 |

medical benefits) while others may load moderately on two or more factors (eg. chance for promotion). The variables in Factor 1 (having a say, interesting/challenging work, opportunity for training, immediate supervisor, chance for promotion, people I work with and job security) are the more intrinsic type of job characteristics. Part of factor 2 (work schedule/hours, location of the job and equipment I use on the job), are more extrinsic characteristics, although "immediate supervisor" loaded moderately on factor 2 as well as on factor 1 and "people I work" with loaded more heavily on factor 2 than it did on factor 1. Factor 3 is easier to interpret. Retirement benefits and medical benefits are monetary/extrinsic type, job characteristics. Salary and equipment both loaded heaviest on factor 4 but opportunity for training and chances for promotion loaded on this factor as well.

Table IX is the factor matrix for the white male officers. Factor 1 for the white officers is very similar to factor 1 for the black officers. The differences are in the order of the loadings and that the variable "people I work

## TABLE IX
### FACTOR MATRIX FOR WHITE MALE OFFICERS

| VARIABLE | FAC 1 | FAC 2 | FAC 3 |
|---|---|---|---|
| interesting & challenging work | .732 | | |
| immediate supervisor | .697 | | |
| people I work with | .674 | | |
| having a say | .621 | | |
| opportunity for training | .566 | .365 | |
| chance for promotion | .509 | .461 | |
| retirement benefits | | .756 | |
| medical benefits | | .754 | |
| salary | | .612 | |
| job security | | .372 | |
| equipment | | .358 | |
| work schedule/hours | | | .838 |
| location of job | .354 | | .541 |

with" loaded moderately between factors 1 and 2 for the black officers but loaded most heavily on factor 1 for the white officers. Retirement and medical benefits and salary all loaded heaviest on factor 2 (monetary/ extrinsic characteristics). Work schedule/hours and location of the job (also extrinsic type job characteristics) loaded heaviest on factor 3 for the white officers while they loaded heaviest on factor 2 for the black officers.

The eigenvalue of a factor is a measure of the relative importance of that factor. The sum of the eigenvalues equals the amount of the total variance that exists in the variables. The eigenvalue for factor 1 of the black officers was 4.01 explaining 30.9% of the total variance in the variables. For the white officer factor 1, the eigenvalue was 3.82, explaining 29.4% of the total variance. In both cases factor 1 explains a substantial amount of the total variance. For the white officers, factor 2 explains an additional 10.6% of the variance and factor 3 explains 8.1% more of the total variance in the variables. For the black officers, factor 2 explains an additional 13.9%, factor 3 an additional 11.1% and factor 4 explains 8.4% more of the total variance in the variables.

The factors were used as the independent variables in two multivariate regression models, one for the black officers and one for the white officers, with general satisfaction with the military as the dependent variable. A dummy variable for branch of service was included to account for any variance in job satisfaction that might be attributable to a particular branch of the military.

Using a stepwise regression technique, the regression coefficients that were significant at the .05 level for the white officers were, factor 1, factor 2, the dummy variable for Marine Corps (positively correlated with satisfaction) and the dummy variable for Navy (negatively correlated with satisfaction). The proportion of the variance in job satisfaction that was explained by these variables ($R^2$) was .333. For the black officers, the significant coefficients were those for factor 1 and factor 2. The effects of branch of service were not significant for the black officers. The $R^2$ statistic for this model was .331. One explanation for the lack of a branch effect is that in addition to the effects of selection criteria which serves to make all these officers similar in many areas, the process by which the blacks make the decision to become military officers has an homogenizing effect so that the black officers are more similar to one another than the white officers are to each other. This would indicate that the group of people in the black community who evaluate their career opportunities and choose the military as their alternative are a very homogeneous and also probably quite small group of individuals.

To further refine the two models and explain more of the variance in job satisfaction, an additional set of variables was examined for inclusion. The final multivariate model formulated for the white officers included factor 1, "feelings about current location", factor 2, factor 3, the Marine Corps dummy, "feelings about current housing", the Navy dummy, commissioning source (academy vs. nonacademy

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graduate) and "chances of finding good civilian employment".
This model accounted for .381 of the variance in job
satisfaction.

The model for the black officers included factor 1,
factor 2, "expected earnings in a civilian job" and "feel-
ings about current location". This model accounted for .396
of the variance in job satisfaction. "Feelings about
current location" had good explanatory power in both models,
supporting the hypothesis that the way an individual feels
about his current duty station and job has an effect on
overall satisfaction with the military. The importance of
this variable goes along with the pattern seen in the factor
analysis. Many of the variables that loaded heaviest on
factor 1 (for both the black and white officers) were job
characteristics that the individual encounters every day;
they are the more short-term characteristics like "immediate
supervisor", "having a say", "interesting/challenging work"
and "people I work with".

Table X is a summary of the factor analysis for the
black and the white officers. Factor 1, which is the combi-
nation of variables that explains the most variation in this
set of job facets, is almost identical for the black and
white officers. The only differences are that job security
loads on factor 1 for the black officers and does not for
the white officers and people I work with is enters factor 1
for the white officers and does not for the black officers.
Both of these variables appear in factor 2 for the officer
group that did not have it in factor 1. Retirement and
medical benefits and salary all load on factor 2 for the
white officers. But these three measures of monetary
benefits load on factors 3 and 4 for the black officers.

Table XI is a summary of the multivariate models for the
two groups. Clearly, the same job characteristics are
important to both the black and white junior officers in the
evaluation of their satisfaction with the military. Factor

TABLE X

SUMMARY OF THE FACTOR ANALYSIS BY RACE

Black Officers                    White Officers

FACTOR 1

having a say                      interesting/challenging work
interesting/                      immediate supervisor
challenging work
oppor. for training               people I work with
immediate supervisor              having a say
chance for promotion              opportunity for training
job security                      chance for promotion


FACTOR 2

work schedule/hours               retirement benefits
location of job                   medical benefits
people I work with                salary
                                  job security
                                  equipment


FACTOR 3

retirement benefits               work schedule/hours
medical benefits                  location of job


FACTOR 4

salary
equipment


1 explained 24.5% of the variation in job satisfaction for
the white officers and factor 1 for the black officers
explained 18.4% of the variation in their job satisfaction.

The variable for branch of service did not significantly
contribute to explaining job satisfaction for the black
officers. This does not disconfirm that branch differences
exist among black officers. Further analysis in economic
and discrimination areas would have to be accomplished to
determine if, in fact, there were no branch differences in
any areas for the black officers. The effects of branch
were significant for the white officers. Using the Air
Force as the base for the dummy variable the results showed
that white officers in the Marine Corps were more satisfied
than those in the Air Force and Navy officers were less
satisfied (and Army officers had statistically the same

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## TABLE XI

### SUMMARY OF MULTIVARIATE ANALYSIS BY RACE

#### Model of Job Satisfaction for Black Male Officers

| Variable | Sig T | Multiple R | R Square |
|---|---|---|---|
| Factor 1 | .001 | .429 | .184 |
| Factor 2 | .001 | .556 | .309 |
| Expected civ. earnings | .038 | .593 | .352 |
| Feelings about current location | .000 | .629 | .396 |

#### Model of Job Satisfaction for White Male Officers

| Variable | Sig T | Multiple R | R Square |
|---|---|---|---|
| Factor 1 | .000 | .495 | .245 |
| Feelings about current location | .000 | .578 | .297 |
| Factor 2 | .000 | .545 | .334 |
| Factor 3 | .000 | .595 | .353 |
| Navy | .001 | .604 | .365 |
| Feelings about current housing | .000 | .611 | .373 |
| Marine Corp | .002 | .613 | .376 |
| Commission Source | .006 | .616 | .379 |
| Chance of finding good civ. job | .010 | .618 | .381 |

level of satisfaction as those in the Air Force).  Further
analysis that has a large enough minority sample to be able
to examine the data individually for race and service would
be able to identify the areas that differ by branch of
service for the white officers.

# IV. CONCLUSIONS AND RECOMMENDATIONS

## A. CONCLUSIONS

This thesis was primarily exploratory in nature. Due to the small sample sizes of minority officers only black and white officers could be analyzed. Sex differences have an indirect effect on the measurement of job satisfaction, however, the small black sample precluded an analysis of differences that may have been attributable to sex. Undoubtedly, some of the findings in the bivariate section were a result of a combination of sex and race differences rather than race alone.

Young black and white male military officers in 1979 were similar in both bidemographical characteristics and in their evaluations of job characteristics and alternative job opportunities. The variables that had the highest explanatory powers were those that dealt with the more intrinsic type of job characteristics such as "having a say" which measures autonomy, "interesting and challenging work", "immediate supervisor", "opportunities for training", "chances for promotion", and "people I work with". Satisfaction with current location was also found to be an important predictor of general satisfaction. The job characteristics that had the smallest amount of explanatory power were those of salary, equipment and location of job, which are the more extrinsic type of characteristics.

Black officers perceive discrimination in a number of areas in the military, including promotion, training and daily duty assignments. However, the black officers report a level of general satisfaction similar to that of the white officers. This counter-intuitive result may be caused by the expectation of the black officers' that they would encounter a similar level of discrimination in a civilian

job and, therefore, the perception of discrimination does not adversely affect their general satisfaction.

It appears that the black officers in this survey are a more homogeneous group than are the white officers. This homogeneity is partly due to the selection process, which serves to make all these officers similar to one another, but it is also a result of the process by which the blacks make the decision to become military officers. The group of people in the black community who evaluate their career opportunities and choose the military as their alternative are a very homogeneous and probably relatively small group of individuals.

B. RECOMMENDATIONS

Future research should control for the effects of sex, as well as race, on job satisfaction. This thesis was unable to do that because of the small numbers of black officers in the survey.

When the most recent Department of Defense Survey becomes available, analyses similar to this one should be undertaken. Comparisons between the older and newer data sets would then be possible and could be examined to determine the effectiveness of policies that have been instituted to improve equal opportunity in the officer corps. This type of longitudinal comparison would be helpful in identifying trends in general satisfaction in the military since 1979 and in identifying which policies may have improved racial differences in job satisfaction.

Young black people represent a potentially important pool of future resources for the officer corps. Since the services are faced with a decrease in those eligible for military service, this pool needs to be targeted for future recruiting efforts. Programs that have been established to increase minority participation in the officer ranks need to be monitored for success rate and changed to meet the needs of the participants. This thesis documents that the black

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officers in the military in 1979 were very much like the
white officers in terms of the factors that are associated
with satisfaction with military life.  The major difference
was in their perception of discrimination.  Further research
is needed to investigate the relationship between percep-
tions of discrimination and subsequent job satisfaction.

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